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Ice Cream For America

One of the International Ice Cream Association's (IICA's) major objectives is increasing national sales and consumption of member companies' products—ice cream, ice milk, frozen yogurt, and other frozen desserts. ICE CREAM FOR AMERICA is a nationwide program that accomplishes this objective. Sponsored by Association members, ICE CREAM FOR AMERICA encourages the trade to strengthen ice cream promotions, and increases consumer awareness of ice cream and related products.

The ICE CREAM FOR AMERICA program's current focus is the "July is National Ice Cream Month" campaign. This campaign encourages retailers to increase in-store advertising and promotion, displays, and merchandising of ice cream and related products during July, National Ice Cream Month.

Retailers, wholesalers, and suppliers participate in the "July is National Ice Cream Month" campaign because it increases their profits. IICA also gives them another incentive: The Golden Cone Awards. These awards, presented each October, recognize the best "Ice Cream For America" promotions.

In addition to these activities, the National Dairy Promotion and Research Board (NDB) has joined IICA in promoting ice cream. The NDB, funded by dairy farmers, dedicated more than $6 million in 1990 for an extensive television and trade advertising campaign. The NDB has budgeted close to $7 million in 1991 for this campaign.

THE ICE CREAM FOR AMERICA program and July, National Ice Cream Month are launched with the Capitol Hill Ice Cream Party in Washington, DC. More than 10,000 people attend the gala each year, including senators, representatives, Congressional staff members, government officials, and press.

THE LATEST SCOOP

WORLDWIDE

FACTS & FIGURES ON ICE CREAM
& RELATED PRODUCTS

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Foreword

Ice cream, with its universal appeal to all age groups, continues to grow in popularity. Record high sales of ice cream and related products were registered in 1990.

"The Latest Scoop" reports the trends taking place in the industry and contains information on production and sales in the United States, Canada and 47 other countries, as well as economic data and other relevant information.

The International Ice Cream Association is the trade association for manufacturers and distributors of ice cream and other frozen dessert products. IICA is one of the four constituent organizations of the International Dairy Foods Association. The Association's activities range from legislative and regulatory advocacy to market research and industry training and education. Its 210 member companies produce an estimated 85 pecent of ice cream and related products consumed in the United States and Canada.

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Additional copies to members of the International Ice Cream Association, 1–24 copies, $2.50 per copy; 25–99 copies, 20% discount; 100–499 copies, 30% discount; over 500 copies, 40% discount. Copies to nonmembers $35.00 each. Minimum order for members $10.00. Minimum order for nonmembers $35.00. Includes postage and handling.

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How It All Started

Ice cream probably evolved from chilled wines and other iced beverages. In the fourth century before Chirst, Alexander the Great was reputed to be fond of iced beverages.

And, from ancient records, it is learned that in 62 A.D., the Roman Emperor, Nero, sent fleets of slaves to the mountains of the Apennines to fetch snow and ice which were then flavored with nectar, fruit pulp and honey.

Marco Polo, the 13th century bard and adventurer, brought with him to Europe from the Far East, recipes for water ices . . . said to be used in Asia for thousands of years. These water ices became popular in Venice and throughout Italy.

When Catherine de Medici married Henry II and became Queen of France in 1533, she brought with her recipes for Italian sherbet. It is said that her son, Henry III, was addicted to these delicacies and consumed them daily.

In 1660 the Cafe Procope was founded in Paris by an Italian named Coltelli, and water ices and possibly cream ices were manufactured and dispensed.

This delicacy found its way to America and in 1700 Governor Bladen of Maryland was serving ice cream to his guests.

Dolly Madison created a sensation when she served ice cream as a dessert in the White House at the second inaugural ball in 1812.

The first hand cranked freezer was invented by Nancy Johnson in 1846. She failed to patent it, however, and a similar type was patented by a Mr. Young in 1848.

The first commercial ice cream plant was established in Baltimore in 1851 by Jacob Fussell.

A year before the turn of the century, August Gaulin of Paris invented the homogenizer which is used to help develop the smooth texture of ice cream.

With the coming of mechanical refrigeration, the first batch freezer was invented by H.H. Miller of Canton, Ohio. About 1926, the first continuous freezer was commercially perfected by Clarence Vogt of Louisville, Kentucky.

Italo Marchiony, who emigrated from Italy in the late 1800s, produced the first ice cream cone in 1896 in New York City. He was granted a patent for his special mould in December 1903. In 1904, the ice cream cone was introduced at the St. Louis World's Fair when a Syrian waffle concessionaire named E.A. Hamwi started rolling waffles into the shape of a cone for the benefit of an ice cream vendor who occupied an adjoining booth. It has remained a favorite to this date, with billions of cones consumed each year. Other products, such as ice cream on sticks, ice cream bars and other forms of ice cream, ice milk and sherbet, known in the industry as "novelties" had their beginning in the 1920s.

How Ice Cream Is Made

The basic mix for the manufacture of ice cream is largely cream and other milk ingredients, plus sweeteners.

The ingredients of the mix are carefully blended in proper proportions in a mixing tank. The mix may contain small amounts of functional ingredients, such as a stabilizer, which prevents the formation of ice crystals in the ice cream after it is frozen.

The mix goes to a pasteurizer where it is heated and held at a predetermined temperature for a specific period of time. The most common type of pasteurization is the high-temperature-short-time method in which the mix is heated to 175 degrees F. and held for 25 seconds.

The hot mix then goes to the homogenizer where, under pressure of from 2,000 to 2,500 pounds per square inch, the milkfat globules are broken into still smaller particles to help make the ice cream smooth.

After homogenization, the hot mix is quickly cooled to a temperature of about 40 degrees F.

Next, freezing of the mix is accomplished by one of two methods: a "continuous freezer" which uses a steady flow of mix; or a "batch freezer" which makes a single quantity of ice cream at a time.

While the ice cream is being frozen, blades in the freezer, or "dashers" as they are commonly called, whip and aerate the products. Without this aeration, the finished product would be an inedible, solidly frozen mass of cream, milk, sugar and flavoring. In all states, this aeration, called "overrun," is controlled by requiring that finished ice cream shall weigh not less than 4.5 pounds per gallon and contain at least 1.6 pounds of total food solids.

With the use of the continuous freezer, ingredients such as fruits and nuts are added after the freezing by a mechanical flavor feeder. Liquid flavors are added to the mix prior to freezing.

The filling operation includes many activities such as filling large containers, half gallon, quart and pint packages, paper cups or molds for ice cream on a stick.

After the freezer and filling, ice cream goes to the "hardening room" where sub-zero temperatures further harden the ice cream. From the hardening room, it is loaded into refrigerated trucks for delivery to distributors or retailers.

Overview: United States

The frozen dessert market in 1990 showed considerable strength with frozen yogurt and nonfat/lowfat frozen desserts paving the way for new growth. In addition, ice cream turned in a more favorable performance last year showing a much lower rate of loss than during the previous two years.

Total production of ice cream and related products was up 0.7% for the year. Removing mellorine, which lost 4 million gallons of production during 1990, from the calculation means that all other frozen dairy desserts showed a one percent gain last year with per capita production holding steady.

Overall retail sales for the industry are estimated to have exceeded $9.3 billion (includes frozen novelties).

This solid performance by the industry was led by continued significant gains in frozen yogurt and the introduction of new nonfat/lowfat frozen dairy desserts. Frozen yogurt production climbed another 43 percent in 1990, coming on the heels of more than a 50 percent gain the previous year. Hard frozen yogurt production led the way for the second consecutive year. IICA estimates that hard production shot up nearly two and a half times its 1989 level while soft serve frozen yogurt, further along in its product cycle, still experienced close to a 7 percent gain for the year.

The introduction of new nonfat/lowfat dairy desserts during 1990 provided another significant boost to frozen dessert sales. With more than 15 million gallons of these new products sold during their first year on the market, the outlook for this segment continues to be extremely optimistic.

Notwithstanding the growth in these two lighter product categories, ice cream made a healthy showing last year for the first time since 1988. While production was still down slightly, the rate of decline was less than one-third of the previous two years. Further, ice cream production has actually shown a gain during the first quarter of 1991.

The category that has been adversely impacted by the growth of lighter products is ice milk. Overall production of ice milk was down more than 7 percent during 1990, with much of its business going to frozen yogurt and nonfat/lowfat desserts. The only growth area in ice milk was the superpremiums which began to take off last year.

Sherbet experienced a small decline in production during 1990 but total production levels for this product category continue to hover around 50 million gallons. Water ices showed some increases in production and exceeded 50 million gallons for the first time since 1988.

!CE CREAM AND RELATED FROZEN DESSERTS

Total and Per Capita Production

	1990	% Change from 1989
Total, Ice Cream & Related Frozen Desserts*	1,445,315,000 gals.	+ 0.7
Per Capita Production	23.18 qts.	- 0.3
Ice Cream (Hard & Soft)	816,077,000 gals.	- 1.8
Per Capita Production	13.09 qts.	- 2.8
Ice Milk (Hard & Soft)[1]	348,800.000 gals.	- 7.4
Per Capita Production	5.59 qts.	- 8.4
Frozen Yogurt (Hard & Soft)	118,644,000 gals.	+43.9
Per Capita Production	1.90 qts.	+41.8
Sherbet (Hard & Soft)	50,278.000 gals.	- 4.5
Per Capita Production	0.81 qts.	- 5.5
Water Ices[2]	50,704,000 gals.	+ 3.1
Per Capita Production	0.81 qts.	+ 2.0
Other Frozen Dairy Products[3]	60,812,000 gals.	+40.4
Per Capita Production	0.98 qts.	+39.4

[1]Includes freezer-made milkshakes.
[2]Also contains sorbet, frozen juice bars and gelatin pops.
[3]Includes nonfat dairy desserts, mellorine-type and other vegetable fat products, pudding pops, tofu-based products and other miscellaneous frozen diary desserts.
*Total frozen desserts, less mellorine, increased from 1,423,954 in 1989 to 1,438,333 in 1990, a 1.0% gain. Comparative per capita production was steady at 23.07 quarts.

Note: Frozen yogurt data are available and included in total frozen desserts beginning in 1989. While a direct comparison with 1988 is not available, IICA estimates that total frozen dessert production in 1989 was flat compared to 1988 production.

INTERNATIONAL REVIEW

The United States remained the largest consumer of ice cream and related frozen desserts with a per capita production of 46.4 pints in 1990. Finland continues in second place with per capita consumption of 42.1 pints (for 1987, the latest data reported). Australia ranks as the third largest consumer of frozen dairy desserts with 36.13 pints in 1989. New Zealand remains in fourth place with per capita consumption of 32.7 pints for 1987 (the latest data available). Canada continued in fifth place in 1989 with per capita consumption of 29.3 pints.

U.S. EXPORTS

U.S. exports of ice cream and related products totalled 6.2 million gallons in 1990 with a related value of $27.7 million. The dollar value of frozen dessert exports increased 194% in 1990 compared to 1989 while volume exported was up 80% for the year.

The highest dollar value of frozen dessert exports in 1990 went to:

Japan	$5.9 million	Hong Kong	$1.9 million
United Kingdom	$4.1 million	United Arab Emirates	$1.8 million
Mexico	$2.5 million	Australia	$1.3 million

Significant growth in U.S. exports of frozen desserts is expected to continue in 1991, particularly to developed countries with relatively higher per capita incomes.

THE "REAL" PRICE OF ICE CREAM, 1980–1990

Year	Average Wages All Manufacturing Production Workers	Average Retail Price of Ice Cream	Labor Required to Purchase Half Gallon of Ice Cream
	$ per Hour	*¢ per ½ Gallon*	*Minutes*
1980	7.27	182.3	15.0
1981	7.99	201.6	15.1
1982	8.49	210.3	14.9
1983	8.83	215.8	14.7
1984	9.19	221.8	14.5
1985	9.54	229.9	14.5
1986	9.73	235.7	14.5
1987	9.91	246.0	14.9
1988	10.18	246.0	14.5
1989	10.48	263.0	15.1
1990	10.83	260.5	14.4
% Change 1980–1990	+49%	+43%	−4%

Source: Bureau of Labor Statistics, U.S. Department of Labor.

U.S. EXPORTS OF ICE CREAM AND RELATED PRODUCTS, 1989–1990

Exported to:	Total Frozen Dessert Volume (000 gallons)			Total Frozen Dessert Value (000 $)		
	1989	1990	% change 1989–1990	1989	1990	% change 1989–1990
Australia	71.5	226.9	+217.3	$ 74.7	$ 1,319.5	*
Bermuda	298.4	233.7	− 21.7	1,003.0	716.2	− 28.6
Bahamas	100.9	105.4	+ 4.5	372.6	400.7	+ 7.5
Canada	120.0	186.2	+ 55.2	373.2	1,227.8	+229.0
France	110.3	287.6	+160.7	520.3	1,176.2	+126.1
Germany (West)	106.3	175.4	+ 65.0	536.9	665.7	+ 24.0
Greece	88.2	151.9	+ 72.2	353.8	611.5	+ 72.8
Hong Kong	929.5	642.9	− 30.8	2,613.2	1,897.7	− 27.4
Japan	67.2	1,132.9	*	248.3	5,900.2	*
Kuwait	12.2	76.9	+530.3	34.0	457.8	*
Leeward-Windward Isl.	53.4	83.3	+ 56.0	170.6	212.6	+ 24.6
Marshall Islands	73.0	131.8	+ 80.5	168.0	319.0	+ 89.9
Micronesia, Federate	50.0	57.3	+ 14.6	212.6	149.0	− 29.9
Mexico	294.0	764.9	+160.2	721.8	2,541.0	+252.0
Neth. Antilles	597.8	296.0	− 50.5	631.3	857.3	+ 35.8
New Zealand	0.0	149.9	*	0	885.8	*
Saudi Arabia	160.2	75.5	− 52.9	54.1	357.1	+560.1
Singapore	75.5	97.0	+ 28.5	363.0	531.3	+ 46.4
United Arab Emirates	28.4	322.9	*	64.9	1,848.1	*
United Kingdom	36.3	703.2	*	270.2	4,077.6	*
All Others	185.8	319.9	+ 72.5	613.6	1,528.5	+149.1
TOTAL	3,458.9	6,221.5	+ 80.0	$9,400.1	$27,680.6	+194.5

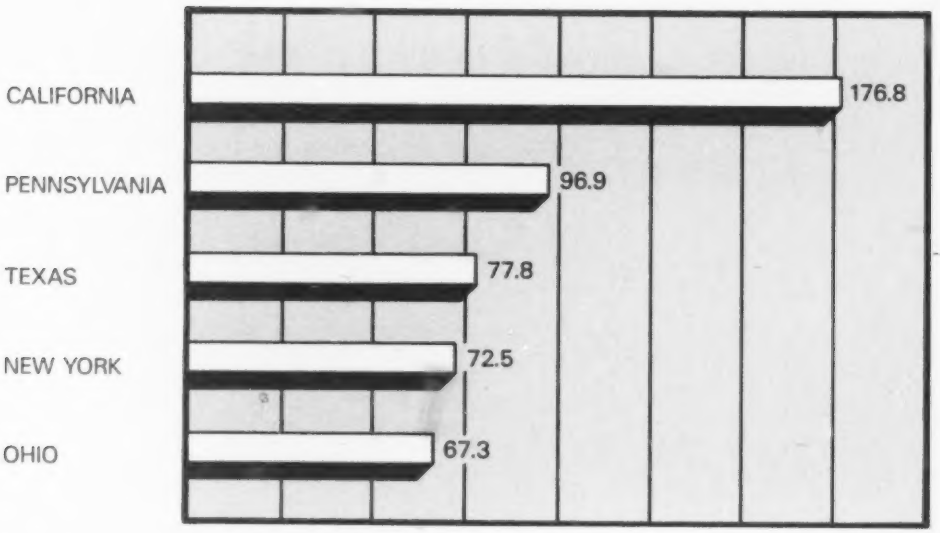
*More than 1,000 percent.
Source: USDA

PRODUCTION OF ICE CREAM AND RELATED PRODUCTS (HARD AND SOFT) BY STATES AND REGIONS, 1990

State & Region	Ice Cream	Ice Milk[1]	Sherbet	Water Ices[2]	Frozen Yogurt[3]	Other Frozen Dairy Products[4]	Total Frozen Products
			(Thousand Gallons)				
NEW ENGLAND							
Maine	1,661	[5]	[5]	[5]	N/A	—	1,1661
New Hampshire	[5]	[5]	[5]	[5]	N/A	—	[5]
Vermont	[5]	[5]	[5]	[5]	N/A	—	[5]
Massachusetts	32,675	[5]	1,225	[5]	N/A	—	33,900
Rhode Island	[5]	[5]	[5]	[5]	N/A	—	[5]
Connecticut	[5]	[5]	[5]	[5]	N/A	[5]	[5]
MID ATLANTIC							
New York	43,242	14,201	2,905	5,010	N/A	7,161	72,519
New Jersey	17,736	4,865	260	189	N/A	[5]	23,050
Pennsylvania	68,924	22,580	3,427	1,923	N/A	[5]	96,854
E.N. CENTRAL							
Ohio	40,735	15,810	3,518	5,890	N/A	1,356	67,309
Indiana	23,600	9,403	1,993	1,072	N/A	[5]	36,068
Illinois	32,908	23,531	1,408	926	N/A	[5]	58,773
Michigan	27,217	12,568	1,646	[5]	N/A	[5]	41,431
Wisconsin	19,646	5,780	1,131	2,839	N/A	[5]	29,396
W.N. CENTRAL							
Minnesota	39,422	12,498	2,068	[5]	N/A	—	53,988
Iowa	30,669	10,395	3,929	[5]	N/A	[5]	44,993
Missouri	13,460	10,133	534	6,492	N/A	1,454	32,073
North Dakota	1,873	1,263	74	[5]	N/A	—	3,210
South Dakota	[5]	[5]	[5]	[5]	N/A	—	[5]
Nebraska	[5]	1,988	[5]	[5]	N/A	[5]	1,988
Kansas	5,961	3,893	283	[5]	N/A	[5]	10,137
SOUTH ATLANTIC							
Delaware	[5]	[5]	[5]	[5]	N/A	—	[5]
Maryland & D.C.	19,332	5,507	1,265	23	N/A	[5]	26,104
Virginia	8,349	9,307	666	[5]	N/A	[5]	18,345
West Virginia	[5]	[5]	[5]	[5]	N/A	—	[5]
North Carolina	34,585	6,711	1,813	836	N/A	1,514	45,459
South Carolina	11,719	4,799	—	[5]	N/A	[5]	16,518
Georgia	9,898	[5]	532	[5]	N/A	[5]	10,430
Florida	24,290	14,540	2,289	[5]	N/A	[5]	41,119
SOUTH CENTRAL							
Kentucky	[5]	[5]	[5]	[5]	N/A	[5]	[5]
Tennessee	15,291	5,405	894	455	N/A	242	22,287
Alabama	19,835	10,259	1,714	[5]	N/A	[5]	31,808
Mississippi	[5]	—	[5]	[5]	N/A	—	[5]
Arkanss	3,840	1,553	262	[5]	N/A	[5]	5,655
Louisiana	[5]	—	[5]	[5]	N/A	[5]	[5]
Oklahoma	12,228	4,214	997	[5]	N/A	—	17,439
Texas	50,801	21,380	2,512	2,778	N/A	366	77,837
MOUNTAIN							
Montana	[5]	926	[5]	[5]	N/A	—	926
Idaho	[5]	[5]	[5]	[5]	N/A	—	[5]
Wyoming	[5]	[5]	[5]	[5]	N/A	—	[5]
Colorado	10,781	6,892	389	481	N/A	422	18,965
New Mexico	[5]	[5]	[5]	[5]	N/A	—	[5]
Arizona	7,232	6,294	404	[5]	N/A	—	13,930
Utah	7,827	3,414	559	[5]	N/A	[5]	11,800
Nevada	[5]	[5]	[5]	[5]	N/A	—	[5]
PACIFIC							
Washington	15,756	9,203	1,368	547	N/A	[5]	26,874
Oregon	8,594	3,806	—	[5]	N/A	—	12,400
California	102,718	43,996	5,446	2,482	N/A	22,141	176,783
Other States[6]	53,272	41,686	4,767	18,761	118,644	26,156	263,286
UNITED STATES	816,077	348,800	50,278	50,704	118,644	60,812	1,445,315

[1]Includes freezer-made milkshake.
[2]Also contains sorbet, frozen juice bars and gelatin pops.
[3]Frozen yogurt data for individual States is not available for 1990.
[4]Includes nonfat fairy desserts, and tofu-based products and miscellaneous frozen dessert products for individual states. Mellorine-type products are included in U.S. total and totals for "Other States."
[5]State data not shown when less than 3 plants reported or individual operations might be disclosed—Production is included in "Other States."
[6]Includes varying states for each product. Alaska and Hawaii included in "Other States" for all products.
— No Production
Prepared by the International Ice Cream Association from data published by the U.S. Department of Agriculture.

FIVE LEADING STATES IN 1990
PRODUCTION OF ICE CREAM AND RELATED PRODUCTS (HARD & SOFT)



PRODUCTION OF ICE CREAM AND RELATED PRODUCTS
FIVE LEADING STATES, 1990

State	Ice Cream	Ice Milk	Sherbet	Water Ices	Total[1]
		(Thousand Gallons)			
California	102,718	43,996	5,446	2,482	176,783
Pennsylvania	68,924	22,580	3,427	1,923	96,854
Texas	50,801	21,380	2,512	2,778	77,837
New York	43,242	14,201	2,905	5,010	72,519
Ohio	40,735	15,810	3,518	5,890	67,309
Total Five States	306,420	117,967	17,808	18,083	491,302
Percent of U.S. Total	37.5%	33.8%	35.4%	35.7%	37.0%

[1]Includes mellorine-type and other frozen products in addition to product categories shown separately. *Does not* include frozen yogurt. Individual state data for frozen yogurt are not available. "Percent of U.S. total" compares state total for all frozen dairy desserts except frozen yogurt.
[2]State data not shown when less than 3 plants reported or individual operations might be disclosed.
Prepared by the International Ice Cream Association from data published by the U.S. Department of Agriculture.

Definitions

Selected Frozen Desserts

ICE CREAM is a frozen food made from a mixture of dairy products, such as milk, cream and nonfat milk, combined with sugars,flavorings, fruits, nuts, etc. Ice cream which contains at least 1.4% egg yolks is called French ice cream or frozen custard. Tce cream and french ice cream contain a minimum of 10% milkfat and weigh not less than 4.5 pounds per gallon.

ICE MILK is a frozen dessert which is similar to ice cream except that it contains between 2% to 7% milkfat.

SHERBET, both fruit sherbet and thoe flavored with flavors other than fruit, contain between 1% to 2% milkfat and weigh not less than 6 pounds per gallon.

WATER ICES, both fruit ices and those flavored with flavors other than fruit, contain no dairy ingredients and weigh not less than 6 pounds per gallon.

MELLORINE is a frozen dessert similar to ice milk in which the milk fat is replaced, in whole or in part, with vegetable fat and the minimum fat content is 6%.

Nutrition Highlights[1]

	Calories	Protein g.	Carbohydrate g.	Fat g.	Vitamin A I.U.	Calcium mg.	Phosphorus mg.	Riboflavin m.g
Vanilla Ice Cream (10% fat)	135	2.4	15.9	7.2	271	88	67	.164
% U.S. RDA[2]		*5.3%*			*5.4%*	*8.8%*	*6.7%*	*9.6%*
Vanilla Ice Cream (16% fat)	175	2.1	16.0	11.8	448	76	58	.141
% U.S. RDA[2]		*4.6%*			*8.9%*	*7.6%*	*5.8%*	*8.2%*
Vanilla Ice Milk (4% fat)	92	2.6	14.5	2.8	107	88	64	.173
% U.S. RDA[2]		*5.7%*			*2.1%*	*8.8%*	*6.4%*	*10.1%*
Orange Sherbet (2% fat)	135	1.1	29.4	1.9	93	52	37	.045
% U.S. RDA[2]		*2.4%*			*1.8%*	*5.2%*	*3.7%*	*2.6%*

[1]Values presented per ½ cup (approximately 4 fluid ounes). Source: Calculated from USDA Agricultural Handbook 8-1 (November 1976) data.
[2]United States Recommended Daily Allowance.

FROZEN DESSERTS INDUSTRY
EMPLOYEES, WAGES AND VALUE OF SHIPMENTS, 1967–1990

Year	All Employees[1]		Production Workers[1]			Value of Product Shipments[2]
	Number	Payroll	Number	Manhours	Wages[1]	
	Thousands	*Million Dollars*	*Thousands*	*Millions*	*Million Dollars*	*Million Dollars*
1967	24.6	156.4	13.8	27.2	77.2	1,273.6
1968	23.7	158.2	13.2	26.6	79.8	1,330.0
1969	22.7	159.2	12.6	25.4	80.6	1,334.8
1970	24.1	166.8	13.9	26.1	85.9	1,343.2
1971	22.6	173.5	12.8	25.1	87.7	1,389.0
1972	21.1	184.7	12.0	23.5	94.7	1,519.4
1973	21.3	196.9	12.1	24.1	100.0	1,639.5
1974	21.3	196.5	11.8	22.9	108.0	1,787.9
1975	20.2	208.5	11.1	22.0	116.4	2,012.9
1976	20.3	223.6	11.3	22.3	125.3	2,063.3
1977	19.1	247.0	11.4	22.7	130.1	2,229.4
1978	18.5	252.5	11.3	21.9	136.6	2,397.2
1979	19.9	277.4	12.3	24.3	151.9	2,733.2
1980	19.6	288.6	12.3	23.7	163.0	3,041.5
1981	20.1	325.6	12.0	23.0	167.1	3,322.1
1982	17.8	313.5	11.1	20.9	177.3	3,281.1
1983	17.7	349.7	9.5	19.7	174.0	3,414.5
1984	20.0	367.2	12.2	23.1	200.4	3,809.9
1985	18.9	384.7	11.7	21.5	199.8	3,881.8
1986	18.2	383.2	11.7	22.3	219.0	3,922.1
1987	20.3	440.1	13.8	26.9	269.0	3,916.5
1988[3]	21.2	463.7	14.4	28.6	281.8	4,297.3
1989[3]	21.0	479.7	14.4	28.6	291.5	4,323.7
1990[3]	20.6	495.7	14.1	28.7	301.2	4,648.7

[1]Data for plants with ice cream and other frozen desserts as the leading product group in value of shipments.
[2]Includes value of shipments of ice cream and other frozen desserts by plants classified in other industries, such as fluid milk.
[3]Estimated by U.S. Department of Commerce.
Source: Bureau of the Census, U.S. Department of Commerce (for data from 1958–1987).

FROZEN DESSERTS INDUSTRY
CAPITAL EXPENDITURES FOR NEW PLANTS AND EQUIPMENT, 1967–1990

Year	Total	For Plants	Share of Total	For Equipment	Share of Total
	Million Dollars	*Million Dollars*	*Percent*	*Million Dollars*	*Percent*
1967	26.6	5.7	21.4	20.9	78.6
1968	22.1	2.8	12.7	19.3	87.3
1969	30.3	5.6	18.5	24.7	81.5
1970	43.7	15.8	36.2	27.9	63.8
1971	28.0	5.7	20.4	22.3	79.6
1972	35.8	7.5	20.9	29.3	79.1
1973	29.2	9.7	33.2	19.5	66.8
1974	27.8	6.2	22.3	21.6	77.7
1975	37.2	10.1	27.2	27.0	72.6
1976	43.2	11.9	27.5	31.3	72.5
1977	56.8	19.4	33.4	38.7	66.6
1978	56.4	12.6	22.3	43.8	77.7
1979	46.3	12.8	27.6	33.5	72.4
1980	46.8	11.1	23.7	35.7	76.3
1981	41.8	6.1	14.6	35.7	85.4
1982	79.9	16.3	20.4	63.6	79.6
1983	75.5	9.3	12.3	66.2	87.7
1984	84.0	17.3	20.6	66.7	79.4
1985	[1]	[1]	[1]	[1]	[1]
1986	105.4	19.6	18.6	85.8	81.4
1987	137.1	34.4	25.1	102.7	74.9
1988[2]	158.5	39.6	25.0	118.9	75.0
1989[2]	140.3	N/A	N/A	N/A	N/A
1990[2]	142.3	N/A	N/A	N/A	N/A

[1]Withheld to avoid disclosing data for individual companies.
[2]Estimated by U.S. Department of Commerce.
N/A—Not Available.
Source: Bureau of the Census, U.S. Department of Commerce (for data from 1954–1987).

ICE CREAM AND RELATED PRODUCTS
TOTAL AND PER CAPITA PRODUCTION (HARD AND SOFT)
1889–1990

Year	Ice Cream		Ice Milk[1]		Frozen Yogurt[2]		Sherbet		Water Ices[3]		Other Frozen Dairy Products[4]		Total Frozen Products	
	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts	Total[5] 1,000 Gallons	Per Capita Quarts
1889	851	0.06											851	0.06
1899	5,021	0.27											5,021	0.27
1909	29,637	1.31											29,637	1.31
1919	152,982	5.86											152,982	5.86
1920	171,248	6.43											171,248	6.43
1930	255,439	8.30											255,439	8.30
1940	318,088	9.64	10,457	0.32			8,089	0.24			2,910	0.09	339,544	10.29
1950	554,351	14.66	36,870	0.98			17,018	0.45	18,299	0.48	8,230	0.22	634,768	16.79
1955	628,525	15.30	90,185	2.20			37,365	0.91	28,158	0.69	35,701	0.86	819,934	19.96
1960	699,605	15.55	145,177	3.23			40,734	0.91	33,361	0.74	50,127	1.11	969,004	21.54
1965	757,000	15.65	230,992	4.77			45,449	0.94	37,119	0.77	60,105	1.23	1,130,215	23.36
1970	761,732	14.95	286,663	5.63			48,887	0.96	37,265	0.73	58,597	1.15	1,193,144	23.42
1975	836,552	15.53	298,789	5.55			48,542	0.90	38,230	0.71	41,100	0.76	1,263,213	23.45
1980	829,798	14.61	293,384	5.17			45,187	0.80	33,386	0.59	23,468	0.41	1,225,223	21.58
1985	901,449	15.16	301,312	5.07			48,206	0.81	49,842	0.84	60,165	1.01	1,360,974	22.88
1986	923,597	15.38	314,673	5.24			49,679	0.83	50,937	0.85	43,443	0.72	1,382,329	23.02
1987	928,356	15.33	327,561	5.41			49,998	0.82	47,098	0.78	48,835	0.81	1,401,848	23.15
1988	882,079	14.43	354,831	5.80			52,175	0.85	50,362	0.82	48,982	0.80	1,388,429	22.70
1989	831,159	13.47	376,507	6.10	82,454	1.34	52,660	0.85	49,168	0.80	43,324	0.70	1,435,274	23.26
1990	816,077	13.09	348,800	5.59	118,644	1.90	50,278	0.81	50,704	0.81	60,812	0.98	1,445,315	23.18

[1]Includes freezer-made milkshakes.
[2]Frozen yogurt production data were not collected by USDA prior to 1989.
[3]Also contains sorbet, frozen juice bars and gelatin pops.
[4]Includes nonfat dairy desserts, mellorine-type and other vegetable fat products, pudding pops, tofu-based products, and miscellaneous frozen dairy desserts.
[5]Data from 1889 to 1919 indicate only the estimated trend of production. Frozen yogurt included in total beginning in 1989.
Note: Per capita production for some products showed a marginal change since 1985 due to the revision in population data by the U.S. Bureau of Census.
Prepared by the International Ice Cream Association from data published by the U.S. Department of Agriculture.

PRODUCTION OF MIX FOR FROZEN PRODUCTS (HARD AND SOFT) BY STATES AND REGIONS, 1990

State & Region	Ice Cream Mix	Ice Milk Mix	Sherbet Mix	Frozen Yogurt Mix[3]	Total Mix for Frozen Products*
		(Thousand Gallons)			
NEW ENGLAND	**30,786**	**15,931**	**1,903**	**2,463**	**51,083**
Maine	775	[1]	—	—	775
New Hampshire	[1]	[1]	[1]	—	[1]
Vermont	[1]	—	[1]	—	[1]
Massachusetts	16,875	1,211	880	—	18,966
Rhode Island	[1]	[1]	[1]	—	[1]
Connecticut	[1]	[1]	[1]	—	[1]
MID ATLANTIC	**71,291**	**19,926**	**4,435**	**8,538**	**104,190**
New York	22,159	3,589	2,035	—	27,783
New Jersey	13,562	[1]	[1]	—	13,562
Pennsylvania	35,570	11,913	2,249	—	49,732
E.N. CENTRAL	**73,700**	**42,794**	**5,476**	**12,020**	**133,990**
Ohio	19,434	8,834	1,677	—	29,945
Indiana	10,713	9,107	1,129	—	20,949
Illinois	19,565	14,683	921	—	35,169
Michigan	13,650	7,216	1,032	—	21,898
Wisconsin	10,338	2,954	717	—	14,009
W.N. CENTRAL	**38,216**	**30,529**	**4,542**	**10,670**	**83,957**
Minnesota	11,347	[1]	853	—	12,200
Iowa	14,284	6,130	3,042	—	23,456
Missouri	5,790	4,912	339	—	11,041
North Dakota	726	942	47	—	1,715
South Dakota	[1]	[1]	—	—	[1]
Nebraska	[1]	1,447	[1]	—	1,447
Kansas	2,857	2,175	190	—	5,222
SOUTH ATLANTIC	**56,573**	**28,864**	**4,810**	**12,468**	**102,715**
Delaware	[1]	[1]	—	—	[1]
Maryland & D.C.	9,735	2,584	[1]	—	12,319
Virginia	4,977	7,126	392	—	12,495
West Virginia	[1]	[1]	[1]	—	[1]
North Carolina	18,286	3,592	1,137	—	23,015
South Carolina	6,039	2,283	[1]	—	8,322
Georgia	4,718	[1]	339	—	5,057
Florida	12,760	8,540	1,245	—	22,545
SOUTH CENTRAL	**60,787**	**31,498**	**4,408**	**18,960**	**115,653**
Kentucky	[1]	[1]	[1]	—	[1]
Tennessee	8,408	3,499	558	—	12,465
Alabama	10,641	5,325	1,161	—	17,127
Mississippi	[1]	[1]	[1]	—	[1]
Arkansas	2,034	763	147	—	2,944
Louisiana	[1]	[1]	[1]	—	[1]
Oklahoma	5,981	1,619	573	—	8,173
Texas	27,830	14,122	1,616	—	43,568
MOUNTAIN	**18,537**	**13,563**	**1,263**	**1,865**	**35,228**
Montana	[1]	667	[1]	—	667
Idaho	[1]	[1]	[1]	—	[1]
Wyoming	—	—	—	—	[1]
Colorado	5,384	4,225	278	—	9,887
New Mexico	[1]	[1]	[1]	—	[1]
Arizona	3,735	3,950	[1]	—	7,685
Utah	3,966	2,257	342	—	6,565
Nevada	[1]	[1]	[1]	—	[1]
PACIFIC	**64,099**	**33,744**	**5,311**	**12,111**	**115,265**
Washington	7,884	4,526	1,042	—	13,452
Oregon	4,275	2,408	[1]	—	6,683
California	50,903	26,304	3,703	—	80,910
OTHER STATES[2]	**28,788**	**47,946**	**4,504**	**79,095**	**160,333**
UNITED STATES	**413,989**	**216,849**	**32,148**	**79,095**	**742,081**

[1]State data not shown when less than 3 plants reported or individual operations might be disclosed, included in "Other States" with Alaska and Hawaii.

[2]Includes varying states for each product.

[3]Frozen yogurt data for individual states not reported due to reasons of confidentiality.

*Equals sum of products shown individually. Products not reported separately for individual states are included in total for "Other States."

Note: Mix for mellorine-type products included in total mix for "Other States" and the U.S.

— No Production

Prepared by International Ice Cream Association from data published by U.S. Department of Agriculture.

MONTHLY PRODUCTION OF ICE CREAM AND RELATED PRODUCTS (HARD AND SOFT)
1988–1990

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.	Total
						(Thousand Gallons)							
						ALL FROZEN PRODUCTS[1]							
1988	81,619	97,428	123,475	119,326	131,723	152,296	143,150	146,511	118,230	98,997	89.009	86,665	1,388,429
1989	92,253	102,504	129,734	122,875	142,565	153,533	143,031	143,442	116,294	103,971	96,435	88,637	1,435,274
1990	93,473	103,452	129,615	125,991	141,073	148,614	153,566	143,657	113,892	108,870	94,403	88,709	1,445,315
						ICE CREAM							
1988	56,668	65,470	79,763	74,899	81,565	94,028	88,669	89,595	74,450	63,104	57,484	56,384	882,079
1989	57,467	60,805	75,110	68,867	80,433	85,781	81,090	81,523	67,102	61,310	57,785	53,886	831,159
1990	54,300	59,016	72,183	69,372	77,666	82,205	85,946	78,980	64,410	63,239	55,509	53,251	816,077
						ICE MILK							
1988	17,926	22,075	29,550	29,675	34,489	39,470	36,744	41,096	31,673	26,223	23,596	22,314	354,831
1989	22,439	24,344	31,942	32,128	38,267	40,874	37,987	39,459	32,135	28,391	25,706	22,835	376,507
1990	23,976	24,224	31,338	32,120	35,069	35,761	36,115	35,439	27,302	25,919	21,690	19,847	348,800
						SHERBERT							
1988	2,769	3,437	4,716	4,699	4,787	6,050	5,895	5,700	4,234	3,607	3,022	3,259	52,175
1989	3,391	3,709	4,902	4,481	5,543	5,980	5,335	5,082	4,100	3,298	3,152	3,689	52,662
1990	3,248	3,443	4,495	4,825	5,416	5,376	5,631	4,968	3,707	3,337	2,907	2,925	50,278
						WATER ICES							
1988	2,105	3,152	4,808	5,476	5,897	6,867	6,555	5,561	3,496	2,530	1,993	1,922	50,362
1989	3,121	4,226	4,900	5,479	5,800	6,314	5,726	4,668	2,942	2,320	1,893	1,779	49,168
1990	2,833	3,561	5,014	5,446	5,949	6,351	6,177	4,971	3,385	2,850	2,300	1,867	50,704
						FROZEN YOGURT[2]							
1988	—	—	—	—	—	—	—	—	—	—	—	—	—
1989	3,418	5,535	7,895	7,496	7,536	8,679	9,081	9,690	6,998	6,186	5,428	4,512	82,454
1990	5,802	8,868	11,027	8,460	10,740	11,814	12,756	12,560	10,314	9,467	8,664	8,172	118,644

[1]Includes all other frozen dairy products in addition to those reported separately. Frozen yogurt included in total beginning in 1989.
[2]Data on frozen yogurt not available prior to 1989.
Prepared by International Ice Cream Association from data published by U.S. Department of Agriculture.

PRODUCTION OF ICE CREAM AND RELATED PRODUCTS (HARD AND SOFT) BY REGIONS, 1990

Region	Ice Cream	Ice Milk[1]	Sherbert	Water Ices[2]	Frozen Yogurt[3]	Other Frozen Dairy Products[4]	Total Frozen Products
				(Thousand Gallons)			
New England	56,431	14,516	2,562	343	7,525	7,555	88,932
Mid Atlantic	129,902	41,646	6,592	7,122	16,750	7,613	209,625
E.N. Central	144,106	67,092	9,696	10,987	17,425	3,353	252,659
W.N. Central	96,872	41,416	7,008	9,513	11,135	5,264	171,208
South Atlantic	109,041	50,392	7,695	10,762	18,920	5,639	202,449
South Central	113,456	53,206	6,911	5,769	18,850	1,798	199,990
Mountain	37,194	22,308	2,098	2,466	7,810	797	72,673
Pacific[5]	129,075	58,224	7,716	3,742	20,229	22,511	241,497
United States	816,077	348,800	50,278	50,704	118,644	60,812	1,445,315

[1]Includes freezer-made milkshake.
[2]Also contains sorbet, frozen juice bars and gelatin pops.
[3]Regional totals for frozen yogurt estimated by IICA.
[4]Includes nonfat dairy desserts, pudding pops, tofu-based products and miscellaneous frozen dairy desserts. Mellorine-type and other vegetable fat products included in U.S. total only.
[5]Alaska and Hawaii included in Pacific Region.
Prepared by International Ice Cream Association from data released by U.S. Department of Agriculture.

ICE CREAM AND RELATED PRODUCTS PER CAPITA PRODUCTION (HARD AND SOFT) BY REGIONS, 1975–1990

Product & Year	New England	Mid Atlantic	E.N. Central	W.N. Central	South Atlantic	South Central	Mountain	Pacific[2]	United States
				(Quarts)					
Ice Cream									
1975	24.72	16.27	17.40	19.23	12.33	11.71	10.96	15.77	15.53
1980	21.83	16.19	16.10	19.15	11.48	10.78	11.93	15.18	14.61
1985	22.97	16.90	15.65	21.44	12.08	12.16	11.66	15.63	15.16
1986	23.34	17.17	15.57	22.51	12.20	12.48	12.04	15.71	15.38
1987	23.53	16.94	15.38	23.55	11.74	12.57	12.06	15.51	15.33
1988	22.23	16.23	14.16	21.42	11.08	11.73	12.38	14.85	14.43
1989	19.54	14.75	12.21	21.29	10.95	11.09	9.77	13.91	13.47
1990	17.04	13.78	13.68	21.87	9.98	10.80	10.86	13.16	13.09
Ice Milk									
1975	5.34	3.40	6.49	7.70	5.86	5.14	5.18	5.95	5.55
1980	4.72	3.11	6.14	7.34	5.49	4.39	6.23	5.48	5.17
1985	4.41	2.94	5.23	8.60	5.07	5.14	5.85	5.25	5.07
1986	4.50	3.50	5.76	8.14	5.31	5.07	6.12	5.12	5.24
1987	4.99	3.71	5.84	9.40	5.04	5.36	5.99	5.19	5.41
1988	5.60	4.02	6.22	9.86	5.10	5.43	7.13	6.07	5.80
1989	5.79	4.35	6.85	10.60	5.59	5.45	5.60	5.88	6.10
1990	4.38	4.41	6.37	9.35	4.61	5.07	6.51	5.93	5.59
Total Frozen Products[1]									
1975	31.59	21.19	25.92	28.38	19.95	20.35	17.26	24.56	23.45
1980	28.41	20.83	24.13	29.24	18.53	17.38	19.29	22.44	21.58
1985	29.23	22.10	22.82	33.40	19.06	19.80	19.88	23.26	22.88
1986	29.82	22.92	23.33	34.09	20.39	19.99	19.81	23.23	23.02
1987	30.09	23.32	23.22	36.86	19.33	20.11	20.12	23.26	23.15
1988	29.85	22.79	22.46	35.81	18.42	19.45	21.27	23.79	22.70
1989	28.79	22.71	22.24	38.73	19.70	19.82	18.06	23.97	23.26
1990	26.85	22.23	23.99	38.66	18.53	19.04	21.22	24.61	23.18

[1]Includes ice cream, ice milk, sherbet, mellorine-type products, water ices and other frozen dairy products through 1988. Frozen yogurt data included starting in 1989. Mellorine-type products included in U.S. total only starting in 1990.

[2]Alaska and Hawaii included in Pacific Region beginning in 1990.

Prepared by the International Ice Cream Association from production data released by the U.S. Department of Agriculture and population estimates from Bureau of the Census, U.S. Department of Commerce.

1990 PRODUCTION OF ICE CREAM, ICE MILK AND TOTAL FROZEN PRODUCTS WITH PERCENTAGE CHANGE FROM 1989 BY REGION

	ICE CREAM		ICE MILK		TOTAL FROZEN PRODUCTS[1]	
	Total 1,000 Gallons	%Change from 1989	Total 1,000 Gallons	% Change from 1989	Total 1,000 Gallons	% Change from 1989
New England	56,431	– 9.4	14,516	– 22.6	88,932	N/A
Mid Atlantic	129,902	– 6.1	41,646	+ 1.9	209,625	N/A
E.N. Central	144,106	+ 12.2	67,092	– 7.0	252,659	N/A
W.N. Central	96,872	+ 2.5	41,416	– 12.1	171,208	N/A
South Atlantic	109,041	– 7.1	50,392	– 16.0	202,449	N/A
South Central	113,456	– 3.0	53,206	– 7.5	199,990	N/A
Mountain	37,194	– 1.3	22,308	+ 3.2	72,673	N/A
Pacific[2]	129,075	– 4.1	58,224	– 0.5	241,497	N/A
United States	816,077	– 1.8	348,800	– 7.4	1,445,315	N/A

[1]Includes ice cream, ice milk, frozen yogurt, sherbet, water ices, mellorine-type products and other frozen dairy products. Regional data on frozen yogurt production for 1990 estimated by the International Ice Cream Association. Since no regional data for mellorine are available starting in 1990, mellorine is included in U.S. total only. A direct comparison of 1990 with 1989 regional production of total frozen products is not available.
[2]Percent change for the Pacific Region from 1989 to 1990 includes Alaska and Hawaii.
N./A.—Not Available
Prepared by International Ice Cream Association from data released by U.S. Department of Agriculture.

NUMBER OF PLANTS PRODUCING ICE CREAM AND RELATED PRODUCTS
1963–1990

Year	Ice Cream		Ice Milk	Sherbet	Water Ices	Mellorine-Type Products
	Including Counter Freezers	Excluding Counter Freezers				
1963	13.915	2,476	33,229	3,625	2,650	1,253
1964	13,106	—	34,485	3,395	2,691	1,313
1965	12,584	—	35,181	3,452	2,852	1,280
1966	12,063	—	36,158	3,580	2,682	1,308
1967	11,452	—	37,312	3,191	2,773	1,363
1968	11,228	1,873	39,474	3,108	2,854	1,792
1969	[1]	1,739	1,160[2]	1,176[2]	[1]	199[2]
1970		1,628	1,088	1,122	377	203
1971		1,520	1,008	1,065	335	177
1972		1,451	984	1,022	363	180
1973		1,330	902	976	321	154
1974		1,239	824	904	299	146
1975		1,167	746	850	281	124
1976		1,124	718	812	281	119
1977		1,095	702	782	273	110
1978		1,062	670	744	263	101
1979		990	604	690	234	89
1980		949	576	654	220	76
1981		895	548	614	212	74
1982		884	524	608	212	67
1983		862	495	594	201	71
1984		853	477	570	199	57
1985		865	455	562	201	60
1986		845	436	542	220	54
1987		829	430	528	204	45
1988		765	385	485	198	33
1989		729	369	460*	189	[1]
1990		709	358	445*	184	[1]

[1]Not available.
[2]After 1968, number of plants producing hard product. Number of counter freezers not available
*Estimated by IICA.
Note: The number of plants producing frozen yogurt is not available.
Prepared by the International Ice Cream Association from data published by the U.S. Department of Agriculture.

HARD FROZEN PRODUCTION—TOTAL AND PER CAPITA
ICE CREAM AND RELATED PRODUCTS
1970–1990

Year	Ice Cream		Ice Milk		Sherbert		Other Frozen Products[1]		Total Products[2]	
	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts
1970	736,741	14.47	134,240	2.64	47,643	0.94	40,775	0.80	959,399	18.85
1975	803,494	14.92	116,609	2.17	45,996	0.85	23,724	0.44	989,823	18.38
1980	801,876	14.12	83,584	1.47	43,745	0.77	9,927	0.17	939,132	16.53
1985	861,766	14.49	61,985	1.04	45,934	0.77	7,133	0.12	976,818	16.42
1986	886,702	14.77	67,733	1.13	47,231	0.79	7,559	0.13	1,009,225	16.82
1987	886,565	14.64	74,062	1.22	46,826	0.78	7,791	0.13	1,015,244	16.76
1988	843,992	13.81	95,086	1.55	49,180	0.80	8,342	0.14	996,600	16.30
1989	788,933	12.79	120,266	1.95	48,976	0.79	28,252	0.46	986,427	15.99
1990	766,952	12.30	118,389	1.90	47,145	0.76	111,512	1.79	1,043,998	16.74

[1]Includes mellorine-type products 1970–1990. Also includes frozen yogurt beginning in 1989. Note: Hard frozen yogurt production estimated by IICA.

[2]Includes ice cream, ice milk, sherbet and mellorine-type products 1970–1990. Also includes frozen yogurt beginning in 1989. Production of hard frozen yogurt estimated at 50.7 million gallons for 1990.

Prepared by the International Ice Cream Association from data released by the U.S. Department of Agriculture.

Total Industry Sales

IICA estimates that total retail sales of ice cream and related frozen dessert products increased a little less than one percent and approached $9.3 billion in 1990. Consumption of frozendesserts at home is estimated to have shown the largest increase and registered about $4.9 billion for the year while away from home consumption is estimated at nearly $4.4 billion.

The dramatic shifts between and within product categories that began in 1988 continued through last year. Total frozen yogurt production shot up another 44 percent on top of 50 percent plus increase in 1989. The introduction of about 15 million gallons of new nonfat/lowfat frozen dairy desserts during 1990 provided another key growth area. Frozen novelty volume declined slightly over the year while total dollar sales held fairly steady with 1989 levels. Ice cream showed the smallest decline last year since 1988 and it looks like, at least for the time being, that ice cream sales have bottomed out and could be on their way back up in 1991. The only area of significant decline last year was ice milk, which lost sales to both frozen yogurt as well as nonfat/lowfat frozen desserts.

PACKAGED ICE CREAM, ICE MILK
QUALITY SEGMENTS—1990

	% of Packaged Ice Cream	% of Packaged Ice Milk	% Packaged Frozen Yogurt
	Dollar Sales	Dollar Sales	Dollar Sales
Superpremium	9.5	3.5	15.7
Pemium	38.1	47.7	67.4
Regular	38.1	38.8	16.4
Economy	14.3	10.0	0.5

PACKAGED ICE CREAM

Packaged ice cream turned in a respectable performance during 1990, particularly when compared to the 1988–89 downturn for this product category. Dollar sales held fairly steady from 1989 through 1990 while volume was off about 3 percent. When away from home consumption is factored in, ice cream volume was down only 1.8% for the year. All evidence so far in 1991 points to an upturn in ice cream sales this year.

PACKAGED ICE MILK

Packaged ice milk was the segment hardest hit last year by the continued growth in frozen yogurt and the introduction of nonfat/lowfat frozen desserts. Packaged ice milk volume was down nearly 10 percent. Away from home soft serve production was also off by nearly 7 percent last year bringing overall ice milk production to about 7.4 percent below its 1989 level. Only superpremium, packaged ice milk managed to defy this trend last year and showed a significant increase in sales.

PACKAGED FROZEN YOGURT

Packaged frozen yogurt volume skyrocketed again last year and increased more than two and a half times its 1989 level. As a result of this impressive growth for this segment, packaged frozen yogurt now stands at nearly 43 percent of total frozen yogurt production, up from less than 10 percent in 1988.

FROZEN NOVELTIES

Dollar sales of frozen novelties showed no growth during 1990, with at home and away from home consumption estimated to have remained fairly even with 1989. Total frozen novelty dollar sales are estimated between $3.1 and $3.2 billion with almost a 50-50 split between consumption at home versus away from home.

COMMERCIAL FOOD SERVICE

The commercial food service sector accounts for about 90% of away from home consumption of ice cream and related products.

Total sales of commercial eating places increased 7% in 1990 and are projected to gain another 5.47% and exceed $162 billion in 1991.

While data on total sales of ice cream and related products in commercial eating places are not available, a separate breakout of ice cream and frozen custard stands shows projected increases for this sector are nearly keeping pace with the overall commercial food service industry. Ice cream and frozen custard stand sales are expected to increase 3.0% to $2.1 billion in 1991.

	Estimated Sales, 1990*	Projected Sales, 1991	% Change 1990 / 1991
	(millions of $)	*(millions of $)*	
Total Eating Places	$154,345.4	$162,639.1	+5.4
Restaurants, Lunchrooms	75,927.0	79,419.6	+4.6
Limited Menu Restaurants (Fast Foods)	69,800.5	74,128.1	+6.2
Commercial Cafeterias	4,374.4	4,606.3	+5.3
Social Caterers	2,239.8	2,421.2	+8.1
Ice Cream & Frozen Custard Stands	2,003.7	2,063.8	+3.0

*Revised
Source: National Restaurant Association

ICE CREAM & FROZEN DESSERT INDUSTRY
Key Profitability and Efficiency Ratios

Median Ratios*	1984 (%)	1988 (%)	1989 (%)	1990 (%)
Profitability				
Return on Sales	3.6	2.7	2.8	2.7
Return on Assets	10.8	4.9	4.8	5.8
Return on Net Worth	19.4	11.6	11.5	N/A
Efficiency				
Assets to Sales	33.6	36.3	36.5	40.3
Sales to Net Working Capital	11.6	8.9	9.9	10.2

*Source: Dun & Bradstreet, *Industry Norms & Key Business Rations*, 1984, 1988, 1989 and 1990. Data reported based on the median for establishments included in the surveys. These data are not necessarily representative of the entire industry and the ratios may not be directly comparable over time due to the potential change in the sample from year to year. These data are, however, based on the most extensive annual survey conducted for individual industry breakouts.

N/A—not available

Definitions

Profitability

Return on Sales (Profit Margin)—Net profit after taxes divided by annual net sales. This ratio provides the profits earned per dollar of sales and is an indicator of not only the efficiency of the operation but also of the firm's ability to withstand adverse conditions.

Return on Assets—Net profit after taxes divided by total assets. This ratio is a key indicator of profitability of a firm.

Return on Net Worth (Return on Equity)—Net profit after tax divided by net worth. Generally, a relationship of at least 10 percent is regarded as a desirable objective for providing dividends plus funds for future growth.

Efficiency

Assets to Sales—Total assets divided by annual net sales. This ratio ties in sales and the total investment used to generate those sales.

Sales to Net Working Capital—Net sales divided by net working capital (current assests minus current liabilities). This ratio indicates whether a company is overtrading or, conversely, carrying more liquid assets than needed for its volume.

FROZEN YOGURT MARKET

	% of Volume Sales by Type, 1989	
	Hard Product	**Soft Serve**
Regular Fat	47.0	30.8
Lowfat	48.5	40.8
Nonfat	1.2	27.8
Other	3.3	0.7

Regular Fat—not less than 3.25% milkfat; Lowfat—2.0%, 1.5%, 1.0% or 0.5% milkfat; Nonfat—less than 0.5% milkfat; Other—product that does not fit into any of above categories.

FROZEN YOGURT FLAVORS, 1989

	% of Volume	
	Hard Product	**Soft Serve**
Vanilla	9%	30%
Chocolate	7%	26%
Strawberry	22%	10%
All Others	62%	34%

Source: 1990 edition of THE U.S. FROZEN YOGURT MARKET published by the International Ice Cream Association and Dairy Foods Magazine. Copies of this publication are for sale and may be ordered through the IICA Marketing Department (202) 296-4250.

HARD FROZEN PRODUCTION OF ICE CREAM AND RELATED PRODUCTS BY REGIONS, 1990

Region	Ice Cream	Ice Milk	Sherbert	Total Three Products[1]
			(Thousand Gallons)	
New England	53,651	6,368	2,562	62,581
Mid Atlantic	115,262	12,040	5,830	133,132
E.N. Central	124,870	16,397	9,066	150,333
W.N. Central	94,043	11,483	6,967	112,493
South Atlantic	102,965	21,843	7,325	132,133
South Central	111,273	21,027	6,658	138,958
Mountain	36,354	4,430	1,852	42,636
Pacific[2]	128,534	24,801	6,885	160,220
United States	766,952	118,389	47,145	932,486

[1]Includes ice cream, ice milk and sherbet.
[2]Alaska and Hawaii included in Pacific Region.
Note: Regional data for hard production of frozen yogurt and mellcrine-type products are not available for 1990.
Prepared by the International Ice Cream Association from data released by U.S. Department of Agriculture.

PER CAPITA AND PERCENT OF TOTAL PRODUCTION OF HARD FROZEN PRODUCTS—ICE CREAM AND ICE MILK BY REGIONS, 1975–1990

Product & Year	New England	Mid Atlantic	E.N. Central	W.N. Central	South Atlantic	South Central	Mountain	Pacific[1]	United States
				(Quarts per Capita)					
Ice Cream									
1975	24.45	14.52	16.86	17.94	12.08	11.48	10.92	15.69	14.92
1980	21.03	14.42	15.77	19.04	11.20	10.57	11.82	15.14	14.12
1985	22.27	14.69	15.03	21.25	11.44	11.95	11.47	15.50	14.49
1986	22.65	14.92	15.11	22.35	11.75	12.26	11.86	15.62	14.77
1987	22.39	14.69	14.73	23.32	11.51	12.07	11.91	15.40	14.64
1988	21.29	14.18	13.34	21.28	10.85	11.54	12.01	14.77	13.81
1989	18.74	12.62	11.52	20.82	10.39	10.85	9.62	13.84	12.79
1990	16.20	12.22	11.85	21.24	9.42	10.60	10.61	13.10	12.30
Ice Milk									
1975	2.34	1.46	1.89	3.13	2.58	2.59	1.74	1.91	2.17
1980	1.33	0.94	1.15	2.29	1.82	1.38	1.56	1.85	1.47
1985	1.28	0.53	0.82	1.99	1.18	1.18	0.67	1.12	1.04
1986	1.52	0.66	0.86	2.43	1.20	1.30	0.67	1.04	1.13
1987	2.34	0.69	1.07	2.24	1.01	1.43	0.69	1.28	1.22
1988	2.87	0.94	1.00	2.80	1.39	1.62	1.24	1.93	1.55
1989	3.14	1.24	1.37	2.53	2.21	2.19	1.09	2.26	1.95
1990	1.92	1.28	1.56	2.59	2.00	2.00	1.29	2.52	1.90
				(Percent of Total Production of Hard Frozen Products)					
Ice Cream									
1975	88	87	85	81	78	70	80	80	81
1980	90	90	89	84	82	80	83	83	85
1985	91	92	90	87	86	84	90	89	88
1986	90	91	90	85	86	83	90	90	88
1987	87	91	89	86	88	82	90	88	87
1988	84	89	88	82	84	80	87	84	85
1989	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1990	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ice Milk									
1975	8	9	10	14	17	16	13	10	12
1980	6	6	6	10	13	10	11	10	9
1985	5	3	5	8	9	8	5	6	6
1986	6	4	5	9	9	9	6	6	7
1987	9	4	6	8	8	10	5	8	7
1988	11	6	7	11	11	11	9	12	10
1989	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1990	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[1]Alaska and Hawaii included in Pacific Region beginning in 1990.

N/A—Not available since regional data for hard production of frozen yogurt and mellorine-type products is not available, total production of hard products is also not available on a regional basis.

Prepared by the International Ice Cream Association from data released by the U.S. Department of Agriculture.

SOFT SERVE PRODUCTION—TOTAL AND PER CAPITA
ICE CREAM AND RELATED PRODUCTS
1970–1990

Year	Ice Cream		Ice Milk		Sherbert		Other Frozen Products[1]		Total Products[2]	
	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts	Total 1,000 Gallons	Per Capita Quarts
1970	24,991	0.49	152,423	2.99	1,244	0.02	11,103	0.22	189,761	3.72
1975	33,058	0.61	182,180	3.38	2,546	0.05	6,314	0.12	224,098	4.16
1980	27,922	0.49	209,800	3.70	1,442	0.03	3,263	0.06	242,427	4.28
1985	39,683	0.67	239,327	4.03	2,272	0.04	1,619	0.03	282,901	4.76
1986	36,895	0.61	246,940	4.11	2,448	0.04	870	0.01	287,153	4.77
1987	41,791	0.69	253,499	4.19	3,172	0.05	2,319	0.04	300,781	4.97
1988	38,087	0.62	259,745	4.25	2,995	0.05	1,646	0.03	302,473	4.95
1989	42,226	0.68	256,241	4.15	3,686	0.06	65,522	1.06	367,675	5.96
1990	49,125	0.79	230,411	3.69	3,133	0.05	128,756	2.06	411,425	6.60

[1]Includes mellorine-type products 1970–1990. Also includes frozen yogurt beginning in 1989. Note: Soft frozen yogurt production estimated at 67.9 million gallons for 1990.

[2]Includes ice cream, ice milk, sherbet and mellorine-type products 1970–1990. Also includes frozen yogurt beginning in 1989.

Note: Soft Frozen yogurt production estimated by IICA.

Prepared by the International Ice Cream Association from data released by the U.S. Department of Agriculture.

SOFT-SERVE PRODUCTION OF ICE CREAM AND RELATED PRODUCTS BY REGIONS, 1990

Region	Ice Cream	Ice Milk	Sherbert	Total Three Products[1]
		(Thousand Gallons)		
New England	2,780	8,148	—	10,928
Mid Atlantic	14,640	29,606	762	45,008
E.N. Central	19,236	50,695	630	70,561
W.N. Central	2,829	29,933	41	32,803
South Atlantic	6,076	28,549	370	34,995
South Central	2,183	32,179	253	34,615
Mountain	840	17,878	246	18,964
Pacific[2]	541	33,423	831	34,795
United States	49,125	230,411	3,133	282,669

[1]Includes ice cream, ice milk and sherbet.
[2]Alaska and Hawaii included in Pacific Region.
— No Production.
Note: Regional data for soft production of frozen yogurt and mellorine type products are not available for 1990.
Prepared by International Ice Cream Association from data released by U.S. Department of Agriculture.

PER CAPITA AND PERCENT OF TOTAL PRODUCTION OF SOFT SERVE PRODUCTS—ICE CREAM AND ICE MILK BY REGIONS, 1975–1990

Product & Year	New England	Mid Atlantic	E.N. Central	W.N. Central	South Atlantic	South Central	Mountain	Pacific[1]	United States
				(Quarts per Capita)					
Ice Cream									
1975	0.27	1.75	0.54	1.29	0.25	0.23	0.04	0.08	0.61
1980	0.80	1.77	0.33	0.11	0.28	0.21	0.11	0.04	0.49
1985	0.70	2.20	0.62	0.19	0.64	0.21	0.19	0.13	0.67
1986	0.69	2.24	0.46	0.17	0.45	0.22	0.18	0.09	0.61
1987	1.14	2.24	0.65	0.23	0.23	0.50	0.15	0.11	0.69
1988	0.94	2.05	0.82	0.14	0.23	0.19	0.37	0.08	0.62
1989	0.81	2.13	0.70	0.49	0.56	0.24	0.15	0.07	0.68
1990	0.84	1.55	1.83	0.64	0.56	0.21	0.25	0.06	0.79
Ice Milk									
1975	3.00	1.94	4.60	4.57	3.28	2.55	3.44	4.04	3.38
1980	3.39	2.17	4.99	5.05	3.67	3.01	4.67	3.63	3.70
1985	3.12	2.40	4.39	6.58	3.87	3.94	5.16	4.11	4.03
1986	2.96	2.83	4.88	5.68	4.09	3.75	5.43	4.06	4.11
1987	2.65	3.02	4.77	7.16	4.03	3.93	5.30	3.91	4.19
1988	2.71	3.07	5.22	7.05	3.71	3.80	5.88	4.04	4.25
1989	2.65	3.11	5.49	8.07	3.39	3.27	4.51	3.62	4.15
1990	2.46	3.14	4.81	6.76	2.61	3.07	5.22	3.41	3.69
				(Percent of Total Production of Soft-Serve Products)					
Ice Cream									
1975	8	47	10	21	7	7	1	2	15
1980	19	45	6	2	7	6	2	1	11
1985	18	47	12	3	14	5	3	3	14
1986	19	44	9	3	10	5	3	2	13
1987	31	44	12	3	6	12	3	3	15
1988	26	40	13	2	6	5	6	2	13
1989	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1990	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ice Milk									
1975	92	52	87	76	91	76	99	96	81
1980	81	55	91	94	91	90	97	99	87
1985	81	52	86	96	85	93	95	96	85
1986	81	56	90	96	89	93	96	97	86
1987	68	55	86	94	93	85	94	96	83
1988	74	59	85	97	93	92	92	97	86
1989	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1990	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[1]Alaska and Hawaii included in Pacific Region beginning in 1990.

N/A—Since regional data for soft-serve frozen yogurt are not available for 1989 and 1990, the percent of total soft-serve market for ice cream and ice milk cannot be calculated.

Prepared by the International Ice Cream Association from data released by the U.S. Department of Agriculture.

Production 1990

Production of total frozen desserts in Canada held steady in 1990 compared to 1989 levels. Trends across product categories were mixed with sherbet showing the highest percentage growth and ice milk showing the largest relative drop from the year earlier period.

Ice cream made somewhat of a comeback during 1990 when compared to 1989's performance. Ice cream production was up 1.2% during 1990 after experiencing a 2.6% decline in 1989. Both hard production and soft serve showed the same relative growth trend.

Sherbet also turned in a solid performance last year with production showing a 7.6% increase from 1989. Per capita sherbet production incrased more than 6 percent.

Water ices also turned in a steady performance last year with 1990 production up .7% from 1989. This comes on top of a 3.7% gain in water ice production in 1989.

After a 2.4% gain in production in 1989, ice milk showed a dramatic 21.4% loss in production during 1990. Per capita production dropped even further and exceeded a 22% loss. This production category is currently undergoing a similar, though less dramatic, downward cycle in the U.S.

	1990 Total Production	% Change from 1989	1990 Per Capita Production	% Change from 1989
	(Liters)[1]		*(Liters)*[1]	
Total Ice Cream	315,768,000	+ 1.2	11.94	– 0.2
Ice Cream—Hard	298,215,000	+ 1.2	11.28	– 0.2
Ice Cream—Soft	17,553,000	+ 1.5	0.66	0.0
Freezer-Made Milkshake[2]	17,557,000	+ 1.5	0.66	0.0
Ice Milk	14,771,000	– 21.4	0.56	– 22.2
Water Ices	15,228,000	+ 0.7	0.58	0.0
Sherbet	3,442,000	+ 7.6	0.13	+ 6.2
TOTAL ALL	366,766,000	+ 0.1	13.87	– 1.3

[1]One U.S. quart equivalent to .946 liters.
[2]Freezer-made milkshake derived by applying 40% overrun to milkshake mix.
Prepared by the International Ice Cream Association from data released by Statistics Canada.

Selected Countries

This section includes data for 47 countries, including United States and Canada. In some countries, production is reported only by the large manufacturers and no estimates are available for the output by small establishments. In such instances, the computed production and per capita are incomplete but the reported figures indidate trends.

Country and Product	ANNUAL PRODUCTION In Reported Units	ANNUAL PRODUCTION Converted to U.S. Gallons	PER CAPITA PRODUCTION In Reported Uints	PER CAPITA PRODUCTION Converted to U.S. Pints
UNITED STATES—1990				
Ice Cream		816,077,000		26.18
Ice Milk		348,800,000		11.18
Frozen Yogurt		118,644,000		3.80
Sherbet		50,278,000		1.62
Water Ices		50,704,000		1.62
Other Frozen Dairy Products		60,812,000		1.96
Total		1,445,315,000		46.36
ARGENTINA—1989	(Liters)		(Liters)	
Ice Cream	35,100,000	9,273,000	1.10	2.32
Ice Milk	5,400,000	1,427,000	0.17	0.36
Sherbet & Water Ices	3,600,000	951,000	0.11	0.23
Other	900,000	238,000	0.03	0.06
Total	45,000,000	11,889,000	1.41	2.97
AUSTRALIA—1989	(Liters)		(Liters)	
Ice Cream	199,020,000	52,581,000	12.10	25.58
Milk Ice	40,747,000	10,765,000	2.48	5.24
Water Ices	23,127,000	6,110,000	1.41	2.98
Other[1]	18,106,000	4,784,000	1.10	2.33
Total	281,000,000	74,240,000	17.04	36.13
AUSTRIA—1988	(Liters)		(Liters)	
Ice Cream	36,000,000	9,511,000	5.20	10.99
Sherbet & Water Ices	12,000,000	3,170,000	1.60	3.38
Total	48,000,000	12,681,000	6.80	14.37
BELGIUM/LUXEMBOURG—1988	(Liters)		(Liters)	
Ice Cream	104,011,000	27,477,000	10.55	22.30
BRAZIL—1989	(Liters)		(Liters)	
Ice Cream	104,000,000	27,477,000	0.69	1.46
Ice Milk	17,000,000	4,491,000	0.13	0.27
Sherbert & Water Ices	52,000,000	13,738,000	0.34	0.72
Total	173,000,000	45,676,000	1.16	2.45
CANADA—1990	(Liters)		(Liters)	
Ice Cream	315,768,000	83,426,000	11.94	25.24
Freezer-made Milkshakes[2]	17,557,000	4,639,000	0.66	1.40
Ice Milk	14,771,000	3,902,000	0.56	1.18
Water Ices	15,223,000	4,022,000	0.58	1.23
Sherbet	3,442,000	909,000	0.13	0.27
Total	366,766,000	96,898,000	13.87	29.32

Country and Product	ANNUAL PRODUCTION In Reported Units	ANNUAL PRODUCTION Converted to U.S. Gallons	PER CAPITA PRODUCTION In Reported Uints	PER CAPITA PRODUCTION Converted to U.S. Pints
COLOMBIA—1989	(Metric Tons)		(Kilograms)	
Ice Cream	12,550	6,149,500	0.38	1.49
Sherbet	1,050	385,875	0.03	0.09
Water Ices	840	308,700	0.02	0.07
Total	14,440	6,844,075	0.43	1.65
CZECHOSLOVAKIA—1987	(Liters)		(Liters)	
Total Frozen Dairy Products	48,465,000	12,804,000	3.10	6.54
DENMARK—1988	(Liters)		(Liters)	
Ice Cream	41,000,000	10,832,000	8.05	17.00
Water Ices	2,800,000	740,000	0.55	1.16
Total	43,800,000	11,572,000	8.60	18.16
EAST GERMANY	(Metric Tons)		(Kilograms)	
Ice Cream (only)	35,000	17,150,000	2.08	8.15
EGYPT—1989	(Metric Tons)		(Kilograms)	
Total Frozen Desserts	9,800,000	4,802,000	0.20	0.78
FINLAND—1987	(Metric Tons)		(Kilograms)	
Ice Cream	53,000	25,970,000	10.74	42.10
FRANCE—1989	(Liters)		(Liters)	
Ice Cream—Industrial	270,618,000	71,497,000	4.83	10.21
WEST GERMANY—1987	(Liters)		(Liters)	
Ice Cream—Industrial	343,600,000	90,779,000	5.63	11.90
Small Establishments	95,000,000	25,099,000	1.56	3.29
Total	438,600,000	115,878,000	7.19	15.19
GREECE	(Metric Tons)		(Kilograms)	
Frozen Desserts	30,000	14,700,000	2.99	11.72
GUATAMALA—1987	(Liters)		(Liters)	
Ice Cream	2,416,864	638,535	0.26	0.55
Ice Milk	1,325,788	350,273	0.15	0.32
Fruit Ice Creams	4,535,987	1,198,408	0.50	1.06
Total	8,278,639	2,187,216	0.91	1.93
HONG KONG—1987				
Ice Cream		4,500,000		8.04
Sherbet		100,000		0.17
Water Ices		950,000		1.70
Total		5,550,000		9.91
HUNGARY—1989	(Metric Tons)		(Kilograms)	
Ice Cream	13,000	6,370,000	1.23	4.82
INDIA—1988	(Metric Tons)		(Kilograms)	
Total Frozen Desserts	320,000	156,800,000	0.38	1.49
ISRAEL—1989	(Metric Tons)		(Kilograms)	
Total Frozen Desserts	26,500	12,985,000	6.06	23.76

Country and Product	ANNUAL PRODUCTION In Reported Units	ANNUAL PRODUCTION Converted to U.S. Gallons	PER CAPITA PRODUCTION In Reported Uints	PER CAPITA PRODUCTION Converted to U.S. Pints
ITALY—1989	(Metric Tons)		(Kilograms)	
Ice Cream—Industrial	198,300	97,167,000	3.44	13.48
Small Establishments	100,000	49,000,000	1.74	6.82
Total	298,300	146,167,000	5.18	20.30
IVORY COAST—1989	(Metric Tons)		(Kilograms)	
Ice Cream & Related Products	10,400	5,096,000	0.90	3.53
JAPAN—1990*	(Liters)		(Liters)	
Ice Cream	238,276,000	62,952,500	1.93	4.08
Frozen Yogurt	21,500	5,700	0.05	0.11
Ice Milk	59,900,000	15,826,000	0.48	1.02
Lacto Ices	330,500,000	87,318,000	2.67	5.64
Water Ices	282,600,000	74,663,000	2.29	4.84
Total	911,297,500	240,765,000	7.42	15.69
KENYA—1989	(Liters)		(Liters)	
Ice Cream	1,250,000	330,200	0.05	0.11
Milk Ices	105,000	27,800	0.01	0.02
Soft Serve	280,000	74,000	0.03	0.06
Water Ices	190,000	50,200	0.02	0.04
Total	1,825,000	482,200	0.11	0.23
KOREA—1989	(Liters)		(Liters)	
Ice Cream	84,534,000	22,334,000	1.95	4.12
MALAYSIA—1988	(Liters)		(Liters)	
Ice Cream	7,459,000	1,971,000	0.45	0.95
Bars & Popsicles	14,250,000	3,765,000	0.85	1.80
Total	21,709,000	5,736,000	1.30	2.75
MOROCCO—1988	(Metric Tons)		(Kilograms)	
Ice Cream	560	274,400	0.02	0.08
NEW ZEALAND—1987	(Liters)		(Liters)	
Ice Cream	46,567,000	12,303,000	14.05	29.67
Soft Serve	4,854,000	1,282,000	1.47	3.09
Total	51,421,000	13,585,000	15.52	32.76
NIGERIA—1988	(Liters)		(Liters)	
Ice Cream	3,500,000	925,000	0.03	0.06
NORWAY—1988	(Liters)		(Liters)	
Ice Cream	47,979,000	12,676,000	11.09	25.13
Soft Ice Cream	2,566,000	678,000	0.06	1.27
Sherbert	2,686,000	710,000	0.07	1.48
Total	53,231,000	14,064,000	13.2	27.88
PAKASTAN—1989	(Metric Tons)		(Kilograms)	
Ice Cream	28,000	13,720,000	0.25	0.98
Ice Milk	10,000	4,900,000	0.09	0.35
Sherbert	15,000	5,512,500	0.14	0.55
Total	53,000	24,132,500	0.48	1.88

PRODUCTION OF ICE CREAM AND RELATED PRODUCTS—CANADA
1974–1990

Year	Ice Cream			Freezer-made Milkshake[1]	Ice Milk	Sherbet	Water Ices	Total All Products
	Hard	Soft	Total					
				(Thousand Liters)[2]				
1974	259,164	18,580	277,744	12,003	11,429	3,841	11,583	316,600
1975	266,515	20,717	287,232	11,820	12,675	3,337	12,602	327,666
1976	258,850	20,721	279,571	13,219	14,084	3,578	11,665	322,117
1977	269,637	21,536	291,173	15,364	15,219	3,122	11,398	336,276
1978	266,150	21,465	287,615	14,718	15,158	3,528	11,786	332,805
1979	289,748	17,921	307,669	24,112	12,130	3,664	12,744	360,319
1980	295,215	16,718	311,933	26,803	12,446	3,170	12,924	367,276
1981	292,421	19,549	311,970	28,094	13,429	2,900	13,074	369,467
1982	284,898	18,541	303,439	27,391	13,345	2,486	14,249	360,910
1983	293,784	17,805	311,589	28,164	13,435	3,194	16,266	372,648
1984	283,996	17,209	301,205	26,244	16,929	2,900	19,496	366,774
1985	292,667	17,540	310,207	28,869	16,481	2,556	15,886	373,999
1096	300,394	17,727	318,121	31,078	17,432	2,580	17,285	386,496
1987	293,458	17,561	311,019	29,386	15,561	3,306	14,363	373,635
1988	304,524	16,397	320,921	20,051	18,166	2,953	14,589	376,680
1989	294,706	17,302	312,008	17,303	18,794	3,200	15,125	366,430
1990	298,215	17,553	315,768	17,557	14,771	3,442	15,228	366,766

[1]Freezer-made milkshake derived by applying 40% overrun in milkshake mix.
[2]One U.S. quart equivalent to .946 liter.
Prepared by the International Ice Cream Association from data released by Statistics Canada.

MONTHLY PRODUCTION OF ICE CREAM AND RELATED PRODUCTS—CANADA
1990

Month	Ice Cream			Freezer-made Milkshake[1]	Ice Milk	Sherbet	Water Ices	Total All Products
	Hard	Soft	Total					
				(Thousand Liters)[2]				
January	16,028	488	16,516	995	554	272	374	18,711
February	18,829	458	19,287	1,101	889	279	681	22,237
March	25,840	659	26,499	1,640	928	354	1,185	30,606
April	25,447	1,552	26,999	1,443	1,175	360	1,728	31,705
May	30,274	2,322	32,596	1,786	1,799	391	2,280	38,852
June	31,862	2,819	34,681	1,957	2,192	358	2,323	41,511
July	32,901	3,091	35,992	1,931	2,103	272	2,345	42,643
August	32,153	2,815	34,968	1,871	2,086	392	1,907	41,224
September	23,139	1,203	24,342	1,273	1,010	183	905	27,713
October	21,233	1,022	22,255	1,279	867	261	541	25,203
November	20,130	604	20,734	1,157	663	200	519	23,273
December	20,379	520	20,899	1,124	505	120	440	23,088
YEAR	298,215	17,553	315,768	17,557	14,771	3,442	15,228	366,766

[1]Freezer-made milkshake derived by applying 40% overrun to milkshake mix.
[2]One U.S. quart equivalent to .946 liter.
Prepared by the International Ice Cream Association from data released by Statistics Canada.

PER CAPITA PRODUCTION OF ICE CREAM—CANADA BY PROVINCES, 1983–1990

Province	1983	1984	1985	1986	1987	1988	1989	1990
			(Liters)[1]					
Alberta	14.74	15.50	16.19	16.68	15.29	14.81	13.87	13.43
British Columbia	12.49	10.71	11.02	11.16	11.07	10.13	10.21	10.98
Manitoba	19.98	18.27	17.46	15.84	15.84	14.94	15.04	14.52
Nova Scotia	13.50	12.99	12.55	12.68	13.26	13.27	13.47	12.32
Ontario	13.60	12.86	13.54	13.90	13.05	13.61	12.80	13.55
Quebec	10.82	10.65	10.68	11.07	11.12	10.94	10.41	9.34
CANADA[2]	12.56	12.05	12.32	12.54	12.13	12.37	11.96	11.94

[1]One U.S. quart equivalent to .946 liter.
[2]Includes production in New Brunswick, Newfoundland, Prince Edward Island and Saskatchewan which could not be reported separately.
Prepared by the International Ice Cream Association from data released by Statistics Canada.

PER CAPITA PRODUCTION OF HARD AND SOFT ICE CREAM—CANADA BY PROVINCES, 1988–1990

Province	Year	Production				
		Hard	Soft	Total	Hard	Soft
		(Thousand Liters)[1]			(Percent)	
Alberta	1988	32,411	2,991	35,402	92	8
	1989	30,809	2,865	33,674	91	9
	1990	30,090	2,821	32,911	91	9
British Columbia	1988	26,663	3,580	30,243	88	12
	1989	27,598	3,636	31,234	88	12
	1990	30,019	4,028	34,047	88	12
Manitoba	1988	14,595	1,615	16,210	90	10
	1989	14,717	1,618	16,335	90	10
	1990	14,242	1,557	15,799	90	10
Nova Scotia	1988	10,721	996	11,717	91	9
	1989	10,983	963	11,946	92	8
	1990	10,061	931	10,992	92	8
Ontairo	1988	126,237	2,254	128,491	98	2
	1989	119,789	2,089	121,878	98	2
	1990	128,901	2,275	131,176	98	2
Quebec	1988	68,177	4,555	72,732	94	6
	1989	64,359	5,117	69,476	93	7
	1990	58,097	4,823	62,920	92	8
CANADA[2]	1988	304,524	16,397	320,921	95	5
	1989	294,706	17,302	312,008	94	6
	1990	298,215	17,553	315,768	94	6

[1]One U.S. quart equivalent to .946 liter.
[2]Includes production in New Brunswick, Newfoundland, Prince Edward Island and Saskatchewan which could not be reported separately.
Prepared by the International Ice Cream Association from data released by Statisics Canada.

Country and Product	ANNUAL PRODUCTION In Reported Units	ANNUAL PRODUCTION Converted to U.S. Gallons	PER CAPITA PRODUCTION In Reported Uints	PER CAPITA PRODUCTION Converted to U.S. Pints
POLAND—1989	(Metric Tons)		(Kilograms)	
Ice Cream	34.167	16,742,000	0.90	3.53
PORTUGAL—1988	(Kilograms)		(Kilograms)	
Ice Cream & Related Products	12,310,000	6,031,900	1.18	4.63
SAUDI ARABIA—1987	(Liters)		(Liters)	
Ice Cream	24,500,000	6,473,000	1.65	3.50
SOUTH AFRICA—1988	(Liters)		(Liters)	
Ice Cream	19,305,000	5,100,000	0.50	1.06
Sherbet	25,852,000	6,830,000	0.67	1.41
Soft Serve	5,574,000	1,473,000	0.14	0.30
Water Ices	2,984,000	788,000	0.08	0.17
Milk Ices	3,745,000	989,000	0.10	0.21
Total	57,460,000	15,181,000	1.49	3.15
SPAIN—1988	(Liters)		(Liters)	
Ice Cream	107,570,000	28,420,000	2.76	5.83
Water Ices	39,220,000	10,362,000	1.00	2.11
Total	146,790,000	38,782,000	3.76	7.94
SWEDEN—1989	(Liters)		(Liters)	
Ice Cream (Hard)	105,370,000	27,839,000	12.42	26.26
Water Ices	6,270,000	1,657,000	0.74	1.56
Soft Ice Cream	7,970,000	2,106,000	0.94	1.99
Total	119,610,000	31,602,000	14.1	29.81
SWITZERLAND—1989	(Liters)		(Liters)	
Ice Cream and Related Products	51,171,000	13,519,000	7.70	16.28
TAIWAN—1989	(Metric Tons)		(Kilograms)	
Ice Cream	20,796	10,190,040	0.99	3.88
Novelties	4,200	2,058,000	0.20	0.78
Total	24,996	12,248,040	1.19	4.66
TURKEY—1989	(Liters)		(Liters)	
Ice Cream and Related Products	51,200,000	13,527,000	0.92	1.94
UNITED ARAB EMIRATES—1987	(Liters)		(Liters)	
Ice Cream	5,864,000	1,549,300	3.18	6.71
Ice Milk	1,340,000	354,000	0.72	1.53
Water Ices	1,252,000	330,800	0.67	1.43
Other	49,000	12,900	0.02	0.06
Total	8,505,000	2,247,000	4.59	9.73

Country and Product	ANNUAL PRODUCTION In Reported Units	ANNUAL PRODUCTION Converted to U.S. Gallons	PER CAPITA PRODUCTION In Reported Uints	PER CAPITA PRODUCTION Converted to U.S. Pints
UNITED KINGDOM—1988	(Liters)		(Liters)	
Bulk	102,059,000	26,964,000	1.79	3.78
Soft Ice Cream Mix[3]	7,926,000	2,094,000	0.14	0.30
Home Packs	107,765,000	28,472,000	1.89	3.99
Water Ices	18,929,000	5,001,000	0.33	0.70
Other Stick Confections	15,227,000	4,023,000	0.27	0.57
All Other	49,666,000	13,122,000	0.87	1.84
Total	301,572,000	79,676,000	5.29	11.18
USSR—1987	(Metric Tons)		(Kilograms)	
Ice Cream	667,000	326,830,000	2.31	9.06
VENEZUELA—1989	(Liters)		(Liters)	
Total Frozen Dessert	80,000,000	21,136,000	4.15	8.77
YUGOSLAVIA—1988	(Metric Tons)		(Kilograms)	
Ice Cream—Industrial	21,300	10,437,000	0.90	3.53
Small Establishments	7,100	3,479,000	0.30	1.18
Total	28,400	13,916,000	1.20	4.71

[1]Includes aerated milk-based confections and milk-based mixes for soft serves and thick shakes.
[2]Freezer-made milkshake derived by applying 40% overrun in milkshake base.
[3]Converted into ready-made soft ice cream.
*Estimated by the IICA.

CONVERSION FACTORS:
1 Liter = .2642 U.S. Gallons
= 2.1114 U.S. Pints

1 U.S. Gallon of Ice Cream or Ice Milk = 4.5 Pounds
1 U.S. Gallon of Sherbet of Water Ices = 6.0 Pounds

1 Kilogram(s) = 2.205 Pounds
= .4900 U.S. Gallons of Ice Cream or Ice Milk
= .3675 U.S. Gallons of Sherbet or Water Ices
= 3.920 U.S. Pints of Ice Cream or Ice Milk
= 2.940 U.S. Pints of Sherbet of Water Ices

1 Metric Ton (1,000 Kilograms) = 2,205 Pounds
= 490.0 U.S. Gallons of Ice Cream or Ice Milk
= 367.5 U.S. Gallons of Sherbet or Water Ices

Prepared by the International Ice Cream Association from data supplied by Agriculture Attaches of the U.S. Department of Agriculture, or from government or trade statistics.